

REMARKS

This responds to the Office Action dated December 5, 2007.

No claims are amended, no claims are canceled, and no claims are added; as a result, claims 1-26 remain pending in this application.

§103 Rejection of the Claims

Claims 1-3, 6-8, 12-17 and 20-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cano et al. ("Robust Sound Modeling for Song Detection in Broadcast Audio") in view of Petrovic (U.S. Patent No. 7,024,018).

Cano describes matching a short subsequence with a fingerprint in the database, and then finding a match for a longer sequence. The two sequences that are the subjects of the matching operations are associated with the same position. If a node contains a certain amount of exact matching results, *an approximate matching method is applied to detect similarities of longer sequences starting at the position of the exact matches.* (Cano, page 5, the right column, under a subheading "Matching Process," emphasis added.) Thus, as explained in the response to the previous Office action, the matching method in Cano uses two sequences that start at the same position, which is distinct from a matching method recited in claim 1 that uses two fingerprint blocks located in the input set at distinct positions.

The Office action combines Cano with Petrovic to arrive at the method of claim 1. The Office action states that a person skilled in the art would combine Cano with Petrovic in order to provide copy control and media verification.

Petrovich is not concerned in any way with matching any value associated with the host signal with any reference value in a database, but rather is related to using the relative positions of watermarks embedded in a host signal as a vehicle that carries embedded information, such as information relating to copy-control and media verification. (Petrovic, 1: 53-60.) The watermarks embedded into a host signal in Petrovic may be separated by a time interval. (Petrovic, Figs 2A and 2B.)

Applying methodology prescribed by MPEP 2143(A) for determining whether a claim is obvious in view of a combination of references, it is necessary to determine whether "one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. at ___, 82 USPQ2d at 1395. It is therefore necessary to evaluate the result of a combination of the matching technique of Cano with techniques for embedding and extracting watermarks in Petrovic.

Introducing the techniques of embedding watermarks of Petrovic into the method of Cano, may result in embedding copy control and media verification watermarks into an information signal. A signal of Cano, modified by introducing watermarks at distinct positions within the signal and extracting information associated with the embedded watermarks (in order to provide copy control and media verification, as suggested by the Office action), does not affect the matching method of Cano. In other words, the matching method of Cano, even when modified to include embedding of time-separated watermarks, would still be distinct from the method of claim 1.

Therefore, because combining Cano with Petrovic does not yield the matching method of claim 1, claim 1 and its dependent claims are not obvious in view of the combination of Cano and Petrovic and should be allowed.

Claim 12, recites "a processing unit arranged to select a first fingerprint block of said set of input fingerprint blocks, the first fingerprint block associated with a first position in the input set of fingerprint blocks; find a first matching fingerprint block in said database that matches the first fingerprint block; select a further fingerprint block from said set of input fingerprint blocks, the further fingerprint block associated with a second position in the input set of fingerprint blocks relative to the first position associated with said first selected fingerprint block, the second position being distinct from the first position; locate a corresponding fingerprint block in said database at a position corresponding to the second position in the set of fingerprint blocks." Thus, claim 12 and its dependent claims are patentable and should be allowed at least for the reasons articulated with respect to claim 1.

Claim 15 recites “a processing unit arranged to select a first fingerprint block of said set of input fingerprint blocks, the first fingerprint block associated with a first position in the input set of fingerprint blocks; find a first matching fingerprint block in said database that matches the first fingerprint block; select a further fingerprint block from said set of input fingerprint blocks, the further fingerprint block associated with a second position in the input set of fingerprint blocks relative to the first position associated with said first selected fingerprint block, the second position being distinct from the first position; locate a corresponding fingerprint block in said database at a position corresponding to the second position in the set of fingerprint blocks.” Thus, claim 15 is patentable and should be allowed at least for the reasons articulated with respect to claim 1.

Claim 16 recites “instruction data to cause a machine to select a first fingerprint block of said set of input fingerprint blocks, the first fingerprint block associated with a first position in the input set of fingerprint blocks; find a first matching fingerprint block in said database that matches the first fingerprint block; select a further fingerprint block from said set of input fingerprint blocks, the further fingerprint block associated with a second position in the input set of fingerprint blocks relative to the first position associated with said first selected fingerprint block, the second position being distinct from the first position; locate a corresponding fingerprint block in said database at a position corresponding to the second position in the set of fingerprint blocks; and determine if the corresponding fingerprint block matches said further fingerprint block.” Thus, claim 16 and its dependent claims are patentable and should be allowed at least for the reasons articulated with respect to claim 1.

Claim 26 recites “receiving a plurality of input fingerprint blocks, the plurality of fingerprint blocks to represent an input information segment; selecting a first fingerprint block from the plurality of input fingerprint blocks, the first fingerprint block associated with a first position in the plurality of input fingerprint blocks; determining a matching fingerprint block in the reference database based on a positive match between the first fingerprint block and the matching fingerprint block; determining a second position in the plurality of input fingerprint blocks, the second position based on a predetermined relationship between two fingerprint blocks from the plurality of input fingerprint blocks, the second position being distinct from the

first position; determining a further fingerprint block at a second position in the plurality of input fingerprint blocks, the second position being distinct from the first position; in the reference database, determining a corresponding fingerprint block based on its position in the reference database corresponding to the second position; comparing the further fingerprint block and the corresponding fingerprint block to determine a match.” Thus, claim 26 is patentable and should be allowed at least for the reasons articulated with respect to claim 1.

Claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cano et al. (“Robust Sound Modeling for Song Detection in Broadcast Audio”) in view of Petrovic (U.S. Patent No. 7,024,018) and in view of Petrovic et al. (U.S. Patent No. 6,737,957).

Petrovic et al. (U.S. Patent No. 6,737,957) - Petrovic '957 - is related to a system for using a watermark embedded in an audio signal to remotely control a device. Petrovic '957, whether considered separately or in combination with Cano and Petrovic, fails to disclose or suggest the elements of claim 16 that are present in claims 18 and 19 by virtue of their being dependent on claim 16. Thus, claims 18 and 19 are patentable in view of Cano, Petrovic, and Petrovic '957 combination and should be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 408-278-4041 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

SCHWEGMAN, LUNDBERG & WOESSNER, P.A.
P.O. Box 2938
Minneapolis, MN 55402
408-278-4041

Date March 5, 2008

By /Elena Dreszer/
Elena B. Dreszer
Reg. No. 55,128

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: MS AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 5th day of March 2008.

Name Dawn R. Shaw

Signature /Dawn R. Shaw/

Name

Signature